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GROUP ART UNIT2167
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TITLE.....METHOD AND APPARATUS FOR LOCALIZED PROTECTED IMAGING OF A FILE SYSTEM

SUPPLEMENTAL APPEAL BRIEF

To: MS Appeal Brief – Patents
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Dear Sir:

In response to the Notice of Non-Compliant Appeal Brief, mailed 22 December 2010, Appellant respectfully submits this supplemental Appeal Brief to correct deficiencies in the Appeal Brief filed on 24 May 2010 and the supplemental Appeal Brief filed on 8 December 2010. This supplemental Appeal Brief includes the following replacement section:

V. SUMMARY OF CLAIMED SUBJECT MATTER

In accordance with 37 C.F.R. § 41.37(a), Appellant respectfully submits this supplemental Appeal Brief in furtherance of the Notice of Appeal filed in the above-identified application on 6 April 2010, which appeals the Final Office Action dated 1 March 2010. In compliance with 37 C.F.R. § 41.37(a)(1), Appellant submits one (1) copy of this supplemental Appeal Brief.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The following description is provided for illustrative purposes and is not intended to limit the scope of the invention.

The present invention relates to methods, apparatus, and computer-readable storage media for backing up file systems in partitions of local storage devices, such as, for example, partitions on a personal computer hard drive.

Claim 1

Described is a method for backing up a file system in a partition comprising a plurality of allocation units, the method comprising:

creating a locally-stored image file by copying each allocation unit occupied by a plurality of files of the file system to the locally-stored image file {*page 5, paragraph 17; page 6, paragraph 18; page 11, paragraph 42; page 12, paragraphs 46 and 49; page 20, paragraph 77; Fig. 3, 204, 302, 306; Fig. 9, 902*}, wherein the locally-stored image file is located within the same partition as the file system being backed up {*page 5, paragraph 17; page 11, paragraphs 42, 44, and 45; page 12, paragraph 49; page 20, paragraph 77; Fig. 2, 102, 104, 204; Fig. 9, 902*};

adding a directory map to the locally-stored image file that associates copied allocation units in the locally-stored image file with names of corresponding files from the file system {*page 5, paragraph 17; page 14, paragraph 54; page 18, paragraph 70; page 19, paragraph 78; page 21, paragraph 83; Fig. 3, 312; Fig. 9, 904*}; and

subsequent to creating the locally-stored image file, protecting the locally-stored image file from accidental user deletion or modification by initiating a process at system startup that opens the locally-stored image file to block subsequent processes from accessing the locally-

stored image file {page 6, paragraphs 18 and 22; page 11, paragraph 45; page 15, paragraph 60; page 16, paragraph 62; page 20, paragraph 79; page 21, paragraph 83; Fig. 9, 906}.

Claim 11

Described is a method for restoring a file system to a partition comprising a plurality of allocation units, the method comprising:

accessing a locally-stored image file located within the partition to which the file system is to be restored {page 6, paragraph 20; page 17, paragraph 66; page 21, paragraph 81; Fig. 9, 908}, the locally-stored image file comprising a directory map and file data for a plurality of files {page 5, paragraph 17; page 14, paragraph 54; page 18, paragraph 70; page 19, paragraph 78; page 21, paragraph 83; Fig. 3, 312; Fig. 9, 904};

initializing at least a subset of the allocation units of the partition not occupied by the locally-stored image file including one or more allocation units used for a directory area of the partition {page 6, paragraph 21; page 17, paragraph 68; Fig. 9, 910};

extracting the file data from the locally-stored image file into the initialized allocation units without disturbing the locally-stored image file {page 6, paragraph 21; page 18, paragraph 69; page 19, paragraph 75; page 20, paragraph 76; page 21, paragraph 82; Fig. 9, 910};

creating a new directory area for the partition using the directory map {page 16, paragraph 64; page 18, paragraphs 70-72; page 20, paragraph 76; page 21, paragraph 83; Fig. 7, 708}; and

protecting the locally-stored image file from accidental user deletion or modification subsequent to creation of the locally-stored image file by initiating a process at system startup that opens the locally-stored image file to block subsequent processes from accessing the locally-

stored image file {page 6, paragraphs 18 and 22; page 11, paragraph 45; page 15, paragraph 60; page 16, paragraph 62; page 20, paragraph 79; page 21, paragraph 83; Fig. 9, 906}.

Claim 21

Described is an apparatus for backing up a file system in a partition comprising a plurality of allocation units, the apparatus comprising:

a processor {page 6, paragraph 18; page 9, paragraphs 34-36; page 12, paragraph 46; page 15, paragraph 60; page 16, paragraph 62; page 17, paragraph 68; Fig. 5, 504; Fig. 6, 602, 604};

a local imager {page 5, paragraph 17; page 11, paragraphs 42-45; page 12, paragraph 49; page 13, paragraphs 50-52; page 14, paragraphs 54-56; page 15, paragraphs 57-59; page 16, paragraph 64; page 20, paragraphs 77-78; Fig. 2, 202; Fig. 3, 202; Fig. 4, 202; Fig. 8, 202} programmed to create a locally-stored image file by copying each allocation unit occupied by a plurality of files of the file system to the locally-stored image file {page 5, paragraph 17; page 6, paragraph 18; page 11, paragraph 42; page 12, paragraphs 46 and 49; page 20, paragraph 77; Fig. 3, 204, 302, 306; Fig. 9, 902}, wherein the locally-stored image file is located within the same partition as the file system being backed up {page 5, paragraph 17; page 11, paragraphs 42, 44, and 45; page 12, paragraph 49; page 20, paragraph 77; Fig. 2, 102, 104, 204; Fig. 9, 902}, and wherein the local imager is configured to add a directory map to the locally-stored image file that associates copied allocation units in the locally-stored image file with names of corresponding files from the file system {page 5, paragraph 17; page 14, paragraph 54; page 18, paragraph 70; page 19, paragraph 78; page 21, paragraph 83; Fig. 3, 312; Fig. 9, 904};
and

a protection component {*page 6, paragraph 18; page 20, paragraph 79; page 21, paragraph 83*} programmed to protect the locally-stored image file from accidental user deletion or modification subsequent to creation of the locally-stored image file by initiating a process at system startup that opens the locally-stored image file to block subsequent processes from accessing the locally-stored image file {*page 6, paragraphs 18 and 22; page 11, paragraph 45; page 15, paragraph 60; page 16, paragraph 62; page 20, paragraph 79; page 21, paragraph 83; Fig. 9, 906*}.

Claim 31

Described is an apparatus for restoring a file system to a partition comprising a plurality of allocation units, the apparatus comprising:

a processor {*page 6, paragraph 18; page 9, paragraphs 34-36; page 12, paragraph 46; page 15, paragraph 60; page 16, paragraph 62; page 17, paragraph 68; Fig. 5, 504; Fig. 6, 602, 604*};

an image locator {*page 6, paragraph 20; page 16, paragraph 64; page 17, paragraphs 65-67; page 21, paragraph 81; Fig. 7, 702*} to find a locally-stored image file located within the partition to which the file system is to be restored {*page 6, paragraph 20; page 17, paragraph 66; page 21, paragraph 81; Fig. 9, 908*}, the locally-stored image file comprising a directory map and file data for a plurality of files {*page 5, paragraph 17; page 14, paragraph 54; page 18, paragraph 70; page 19, paragraph 78; page 21, paragraph 83; Fig. 3, 312; Fig. 9, 904*};

a media formatter {*page 6, paragraph 21; page 16, paragraph 64; page 17, paragraph 68; page 21, paragraph 82; Fig. 7, 704*} to initialize at least a subset of the allocation units of the partition not occupied by the locally-stored image file including one or more allocation units

used for a directory area of the partition {page 6, paragraph 21; page 17, paragraph 68; Fig. 9, 910};

a data extractor {page 6, paragraph 21; page 16, paragraph 64; page 18, paragraph 69-70; page 21, paragraph 82; Fig. 7, 706} to extract the file data from the locally-stored image file into the initialized allocation units without disturbing the locally-stored image file {page 6, paragraph 21; page 18, paragraph 69; page 19, paragraph 75; page 20, paragraph 76; page 21, paragraph 82; Fig. 9, 910};

a directory area builder {page 6, paragraph 22; page 16, paragraph 64; page 18, paragraph 70-72; page 21, paragraph 83; Fig. 7, 708} to build a new directory area for the partition using the directory map {page 16, paragraph 64; page 18, paragraphs 70-72; page 20, paragraph 76; page 21, paragraph 83; Fig. 7, 708}; and

a protection component {page 6, paragraph 18; page 20, paragraph 79; page 21, paragraph 83} programmed to protect the locally-stored image file from accidental user deletion or modification subsequent to creation of the locally-stored image file by initiating a process at system startup that opens the locally-stored image file to block subsequent processes from accessing the locally-stored image file {page 6, paragraphs 18 and 22; page 11, paragraph 45; page 15, paragraph 60; page 16, paragraph 62; page 20, paragraph 79; page 21, paragraph 83; Fig. 9, 906}.

Claim 41

Described is a method for localized backup and restoration of a file system in a partition comprising a plurality of allocation units, the method comprising:

creating a locally-stored image file by copying each allocation unit occupied by a plurality of files of the file system to the locally-stored image file {page 5, paragraph 17; page

6, paragraph 18; page 11, paragraph 42; page 12, paragraphs 46 and 49; page 20, paragraph 77; Fig. 3, 204, 302, 306; Fig. 9, 902}, wherein the locally-stored image file is located within the same partition as the file system being backed up {page 5, paragraph 17; page 11, paragraphs 42, 44, and 45; page 12, paragraph 49; page 20, paragraph 77; Fig. 2, 102, 104, 204; Fig. 9, 902};

adding a directory map to the locally-stored image file that associates copied allocation units in the locally-stored image file with names of corresponding files from the file system {page 5, paragraph 17; page 14, paragraph 54; page 18, paragraph 70; page 19, paragraph 78; page 21, paragraph 83; Fig. 3, 312; Fig. 9, 904};

locating the locally-stored image file within the partition {page 11, paragraph 45; page 14, paragraph 56; Fig. 9, 908};

initializing at least a subset of the allocation units of the partition not occupied by the locally-stored image file including one or more allocation units used for a directory area of the partition {page 6, paragraph 21; page 17, paragraph 68; Fig. 9, 910};

extracting file data from the locally-stored image file into the initialized allocation units without disturbing the locally-stored image file {page 6, paragraph 21; page 18, paragraph 69; page 19, paragraph 75; page 20, paragraph 76; page 21, paragraph 82; Fig. 9, 910};

creating a new directory area for the partition using the directory map {page 16, paragraph 64; page 18, paragraphs 70-72; page 20, paragraph 76; page 21, paragraph 83; Fig. 7, 708}; and

subsequent to creating the locally-stored image file, protecting the locally-stored image file from accidental user deletion or modification by initiating a process at system startup that opens the locally-stored image file to block subsequent processes from accessing the locally-

stored image file {page 6, paragraphs 18 and 22; page 11, paragraph 45; page 15, paragraph 60; page 16, paragraph 62; page 20, paragraph 79; page 21, paragraph 83; Fig. 9, 906}.

Claim 42

Described is a computer-readable storage medium comprising program code for backing up a file system in a partition comprising a plurality of allocation units, the computer-readable storage medium comprising:

program code for creating a locally-stored image file by copying each allocation unit occupied by a plurality of files of the file system to a locally-stored image file {page 5, paragraph 17; page 6, paragraph 18; page 11, paragraph 42; page 12, paragraphs 46 and 49; page 20, paragraph 77; Fig. 3, 204, 302, 306; Fig. 9, 902}, wherein the locally-stored image file is located within the same partition as the file system being backed up {page 5, paragraph 17; page 11, paragraphs 42, 44, and 45; page 12, paragraph 49; page 20, paragraph 77; Fig. 2, 102, 104, 204; Fig. 9, 902};

program code for adding a directory map to the locally-stored image file that associates copied allocation units in the locally-stored image file with names of corresponding files from the file system {page 5, paragraph 17; page 14, paragraph 54; page 18, paragraph 70; page 19, paragraph 78; page 21, paragraph 83; Fig. 3, 312; Fig. 9, 904}; and

program code for protecting the locally-stored image file from accidental user deletion or modification subsequent to creation of the locally-stored image file by initiating a process at system startup that opens the locally-stored image file to block subsequent processes from accessing the locally-stored image file {page 6, paragraphs 18 and 22; page 11, paragraph 45; page 15, paragraph 60; page 16, paragraph 62; page 20, paragraph 79; page 21, paragraph 83; Fig. 9, 906}.

Claim 43

Described is a computer-readable storage medium comprising program code for restoring a file system to a partition comprising a plurality of allocation units, the computer-readable storage medium comprising:

program code to access a locally-stored image file located within the partition to which the file system is to be restored {*page 6, paragraph 20; page 17, paragraph 66; page 21, paragraph 81; Fig. 9, 908*}, the locally-stored image file comprising a directory map and file data for a plurality of files {*page 5, paragraph 17; page 14, paragraph 54; page 18, paragraph 70; page 19, paragraph 78; page 21, paragraph 83; Fig. 3, 312; Fig. 9, 904*};

program code to initialize at least a subset of the allocation units of the partition not occupied by the locally-stored image file including one or more allocation units used for a directory area of the partition {*page 6, paragraph 21; page 17, paragraph 68; Fig. 9, 910*};

program code to extract the file data from the locally-stored image file into the initialized allocation units without disturbing the locally-stored image file {*page 6, paragraph 21; page 18, paragraph 69; page 19, paragraph 75; page 20, paragraph 76; page 21, paragraph 82; Fig. 9, 910*};

program code to create a new directory area for the partition using the directory map {*page 16, paragraph 64; page 18, paragraphs 70-72; page 20, paragraph 76; page 21, paragraph 83; Fig. 7, 708*}; and

program code to protect the locally-stored image file from accidental user deletion or modification subsequent to creation of the locally-stored image file by initiating a process at system startup that opens the locally-stored image file to block subsequent processes from accessing the locally-stored image file {*page 6, paragraphs 18 and 22; page 11, paragraph 45*};

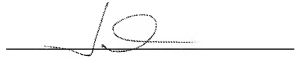
page 15, paragraph 60; page 16, paragraph 62; page 20, paragraph 79; page 21, paragraph 83; Fig. 9, 906}.

CONCLUSION

The changes made in this supplemental Appeal Brief correct the deficiencies in the Appeal Brief filed on 24 May 2010 and the supplemental Appeal Brief filed on 8 December 2010 and place the Appeal Brief in compliance with 37 C.F.R. § 41.37.

Respectfully submitted,

Date: 13 January 2011

A handwritten signature in black ink, appearing to be 'J. Lee', is written over a horizontal line.

Jonathan R. Lee
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